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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
LIM, STEVEN

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/695,737	KIM ET AL.	
	Examiner	Art Unit	
	Steven Lim	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 6, 7, 9-17, 19, 20 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 6, 7, 9-17, 19-20, and 22-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1, 2, 11, 12, 15-17, 24, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Hiramatsu et al. (US 6600933).

3. Regarding Claims 1 and 16, Hiramatsu et al. discloses a antenna selection system including transmitting a data block through a first one of a plurality of sequentially selected antennas (Col. 1, Lines 25-30, Fig. 1), receiving a first signal indicating through a check that an error occurred during transmission or reception of the data block (Col. 6, Lines 41-54), interrupting sequential selection of the plurality of antennas to select a second one of the plurality of antennas in response to the first error signal and retransmitting the data block through the second one of the plurality of antennas (base station performs antenna change control, Col. 6, Lines 41-54).

4. Regarding Claim 2, Hiramatsu et al. further discloses the first error signal indicates whether a receiver correctly received the data transmitted through the first one

of the plurality of antennas (communication terminal sends to the base station a request for retransmission, Col. 6, Lines 41-54).

5. Regarding Claim 11, Hiramatsu et al. further discloses transmission and retransmission of the data block are downlink transmissions (Col. 1, Lines 25-30).

6. Regarding Claim 12, Hiramatsu et al. discloses transmission and retransmission of the data block occurs through a mobile communication system (Col. 3, Lines 30-34).

7. Regarding Claim 15, Hiramatsu et al. further discloses the first error signal is received based on an ARQ from a receiver (ARQ controls, Col. 11, Lines 38-40).

8. Regarding Claim 17, Hiramatsu et al. further discloses sequentially selecting the multiple antennas including the first antenna and the second antenna said sequential selection taking place before the first response signal is checked (Terminal transmits messages to base station and base station sends messages to terminal and after retransmission request then antenna change control is enacted, Fig. 16, Item C).

9. Regarding Claim 24, Hiramatsu et al. further discloses transmission and retransmission of the data block are downlink transmissions (Col. 1, Lines 25-30).

10. Regarding Claim 27, Hiramatsu et al. further discloses the first error signal is received based on an ARQ from a receiver (ARQ controls, Col. 11, Lines 38-40).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 4, 6, 7, 9, 10, 19, 20, 22, 23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu et al. (US 6600933) in view of Eastmond et al. (US 6088337).

14. Regarding Claim 4, Hiramatsu et al. discloses receiving a response signal from the receiver however, Hiramatsu et al. fails to disclose the first error signal is a non-acknowledgement signal transmitted from a receiver.

In an analogous art, Eastmond et al. discloses the first error signal is a non-acknowledgement signal transmitted from a receiver (transmit NAK, Col. 5, Lines 56-57), which enables a standard ARQ system.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to return a non-acknowledgement signal in order to follow standard operations of an ARQ system which is disclosed as in use by Hiramatsu et al. and Eastmond et al.

15. Regarding Claims 6 and 9, Hiramatsu et al. further discloses transmitting data through the second antenna, however Hiramatsu et al. fails to disclose using a consecutive sequence of additional data.

In an analogous art, Eastmond et al. discloses using a consecutive sequence of additional data (Col. 9, Lines 33-36), proper reassembly of data blocks (Col. 9, Lines 33-36).

It would have been obvious to one having ordinary skill in the art at the time of invention was made to use a consecutive sequence of additional data to ensure proper reassembly of data blocks (Col. 9, Lines 33-36).

16. Regarding Claim 7, Hiramatsu et al. further discloses an antenna selection system including transmitting a data block through a first one of a plurality of sequentially selected antennas (Col. 1, Lines 25-30, Fig. 1), receiving a first signal indicating that an error occurred during transmission or reception of the data block (Col. 6, Lines 41-54), interrupting sequential selection of the plurality of antennas to select a second one of the plurality of antennas in response to the first error signal and retransmitting the data block through the second one of the plurality of antennas (base station performs antenna change control, Col. 6, Lines 41-54), however Hiramatsu et al. fails to disclose performing the same for a second error signal and transmitting back to the first antenna.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to perform the same for a second error signal and transmitting back

to the first antenna, since it has been held that mere duplication of the essential working part of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

17. Regarding Claim 10, Hiramatsu et al. further discloses a retransmission system, however Hiramatsu et al. fails to disclose resuming sequential selection of the plurality of antennas after the data block is retransmitted through the second one of the plurality of antennas and transmitting additional data blocks through the sequentially selected antennas.

18. In an analogous art, Eastmond et al. discloses resuming sequential selection of the plurality of antennas after the data block is retransmitted through the second one of the plurality of antennas and transmitting additional data blocks through the sequentially selected antennas (Col. 2, Lines 40-41), which enables the system to process data in a cyclic fashion.

19. It would have been obvious to one having ordinary skill in the art at the time of invention was made to select the resume sequential selection and transmit data through the selected antenna in order to start the process over again.

20. Regarding Claims 19 and 22, Hiramatsu et al. further discloses transmitting data through the second antenna however, Hiramatsu et al. fails to disclose using a consecutive sequence of additional data.

In an analogous art, Eastmond et al. discloses using a consecutive sequence of additional data (Col. 9, Lines 33-36), proper reassembly of data blocks (Col. 9, Lines 33-36).

It would have been obvious to one having ordinary skill in the art at the time of invention was made to use a consecutive sequence of additional data to ensure proper reassembly of data blocks (Col. 9, Lines 33-36).

21. Regarding Claim 20, Hiramatsu et al. further discloses an antenna selection system including transmitting a data block through a first one of a plurality of sequentially selected antennas (Col. 1, Lines 25-30, Fig. 1), receiving a first signal indicating that an error occurred during transmission or reception of the data block (Col. 6, Lines 41-54), interrupting sequential selection of the plurality of antennas to select a second one of the plurality of antennas in response to the first error signal and retransmitting the data block through the second one of the plurality of antennas (base station performs antenna change control, Col. 6, Lines 41-54), however Hiramatsu et al. fails to disclose performing the same for a second error signal and transmitting back to the first antenna.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to perform the same for a second error signal and transmitting back to the first antenna, since it has been held that mere duplication of the essential working part of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

22. Regarding Claim 23, Hiramatsu et al. further discloses a retransmission system, however Hiramatsu et al. fails to disclose resuming sequential selection of the plurality of antennas after the data block is retransmitted through the second one of the plurality of antennas and transmitting additional data blocks through the sequentially selected antennas.

23. In an analogous art, Eastmond et al. discloses resuming sequential selection of the plurality of antennas after the data block is retransmitted through the second one of the plurality of antennas and transmitting additional data blocks through the sequentially selected antennas (Col. 2, Lines 40-41), which enables the system to process data in a cyclic fashion.

24. It would have been obvious to one having ordinary skill in the art at the time of invention was made to select the resume sequential selection and transmit data through the selected antenna in order to start the process over again.

25. Regarding Claim 28, Hiramatsu et al. discloses receiving a response signal from the receiver however, Hiramatsu et al. fails to disclose the first error signal is a non-acknowledgement signal transmitted from a receiver.

In an analogous art, Eastmond et al. discloses the first error signal is a non-acknowledgement signal transmitted from a receiver (transmit NAK, Col. 5, Lines 56-57), which enables a standard ARQ system.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to return a non-acknowledgement signal in order to follow standard

operations of an ARQ system which is disclosed as in use by Hiramatsu et al. and Eastmond et al.

26. Claims 13, 14, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu et al. (US 6600933) in view of Texas Instruments (May 1999, Open Loop Downlink Transmit Diversity for TDD, TSG-RAN WG1 meeting #5).

27. Regarding Claim 13, Hiramatsu et al. discloses performing transmission diversity in a WCDMA system (Col. 1, Lines 10-17), however Hiramatsu et al. fails to disclose an open loop transmit diversity technique is used to transmit data in the mobile communication system.

In an analogous art, TI discloses an open loop transmit diversity technique is used to transmit data in the mobile communication system (Page 1), which enables the system to follow standards in place formed by 3GPP.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to perform the transmission using open loop transmit diversity in a WCDMA system in order to follow standards in place formed by 3GPP.

28. Regarding Claim 14, Hiramatsu et al. discloses performing transmission diversity in a WCDMA system (Col. 1, Lines 10-17), however Hiramatsu et al. fails to disclose the open loop transmit diversity technique is a TSTD technique.

In an analogous art, TI discloses the open loop transmit diversity technique is a TSTD technique (Page 1), which enables the system to follow standards in place formed by 3GPP.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to perform the transmission using open loop transmit diversity in a WCDMA system with TSTD in order to follow standards in place formed by 3GPP.

29. Regarding Claim 25, Hiramatsu et al. discloses performing transmission diversity in a WCDMA system (Col. 1, Lines 10-17), however Hiramatsu et al. fails to disclose an open loop transmit diversity technique is used to transmit data in the mobile communication system.

In an analogous art, TI discloses an open loop transmit diversity technique is used to transmit data in the mobile communication system (Page 1), which enables the system to follow standards in place formed by 3GPP.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to perform the transmission using open loop transmit diversity in a WCDMA system in order to follow standards in place formed by 3GPP.

30. Regarding Claim 26, Hiramatsu et al. discloses performing transmission diversity in a WCDMA system (Col. 1, Lines 10-17), however Hiramatsu et al. fails to disclose the open loop transmit diversity technique is a TSTD technique.

In an analogous art, TI discloses the open loop transmit diversity technique is a TSTD technique (Page 1), which enables the system to follow standards in place formed by 3GPP.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to perform the transmission using open loop transmit diversity in a WCDMA system with TSTD in order to follow standards in place formed by 3GPP.

Response to Arguments

31. Applicant's arguments with respect to claims 1, 2, 4, 6, 7, 9-17, 19-20, and 22-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Lim whose telephone number is (571) 270-1210. The examiner can normally be reached on Mon-Thurs 9:00am-4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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